

**MALDON**

**RURAL SANITARY DISTRICT.**

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**ANNUAL REPORT**

OF THE

**Medical Officer of Health**

FOR

★ 1898, ★

BY

**JOHN C. THRESH, D.Sc., M.D., D.P.H.**

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**MALDON:**

Printed by Richard Poole, Bookseller and Stationer, High Street.

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# Table of Contents.

	PAGE
Population	3
General Sanitary Condition of the District	3
Sewerage and Drainage	8
Public Scavenging	9
River Pollution	10
Provision of Isolation Hospitals	10
London Manure Nuisances	11
Other Nuisances	11
Results of Inspection	12
Dairies and Cowsheds	13
Water Analyses	14
Death of Mr. A. C. Freeman	14
 OUTBREAKS OF INFECTIOUS DISEASE—	
Small Pox	15
Scarlet Fever	15
Diphtheria	15
Typhoid Fever	16
Infectious Diseases and the Peculiar People	17
Distribution of Infectious Diseases	18
 MORTALITY STATISTICS—	
Death Rates	18
Infantile Mortality	19
Phthisis (Consumption), its Cause and Prevention	19
Tables of Death-Rates, etc.	22
Summary of Work done by the Sanitary Inspectors	28

# MALDON RURAL SANITARY DISTRICT.

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## SUB-REGISTRATION DISTRICTS.

					Population 1891 Census <sup>1</sup>
TOLLESBURY	(11 Parishes)	...	...	7,464	
BRADWELL	(5      , , )	...	...	2,515	
SOUTHMINSTER	(5      , , )	...	...	2,290	
MALDON	(11      , , )	...	...	3,353	
				15,622	

To the Chairman and Members of the Maldon Rural District Council.

GENTLEMEN,

Although the past year is one in which a great amount of time has been spent in the consideration of sanitary matters, it is not one in which I can point to any work of importance being carried to completion. It does not follow however that there has been either a waste of time or of energy, on the contrary I am inclined to think that the important projects which have been so fully and carefully considered have benefited by the delay. This is especially the case with reference to the scheme to supply Purleigh and several other parishes with water. This scheme at first met with great opposition from many parishes. After a time this opposition was overcome in several instances, but it was not until after the experience of the last dry season, that all have seen how desirable it is that such a public supply should be provided, and thus enabled your Council to undertake a really comprehensive and satisfactory scheme.

The past summer has been phenomenal for the prolonged drought which caused the inhabitants of several parishes to suffer great privations, good drinking water becoming a valuable marketable commodity. It has however convinced the inhabitants of those districts that they cannot expect any measure of that prosperity which they see returning to other more favoured localities unless an abundant supply of good water is rendered available. In districts where such supplies have been obtained the benefits which have followed have been most marked. Your officers also have learnt lessons from the drought. Their continued observations of the springs in the district have shewn them which can be depended upon for a permanent supply, and which are most readily affected by dry seasons. The observations of the oldest inhabitants have been shewn in many cases to be inaccurate since many springs, 'never known to vary in the dryest summers,' have this year failed more or less completely. Fortunately the one spring at present utilized for supplying a populous parish (Southminster) is one of the few which even the phenomenal drought has not yet affected. The deep wells in the district deriving water from the sands beneath the clay, have also been affected, the water level having fallen some feet. In consequence of this the reservoirs of the wells have had to be deepened, in many cases, to obtain a continuous supply.

The works intended to benefit more than one parish which have actually been decided upon are, the Purleigh and adjoining parishes water supply, and the Isolation Hospitals.

The plans, etc. for the Purleigh water scheme have been deposited with the Local Government Board, and an enquiry was held at Maldon on September 29th, your Council having applied for the necessary powers to borrow the sum of £10,775. The scheme as it now stands, is to collect the water from several springs and to pump this by means of oil engines into a small reservoir at the north end of Thrift Wood where a sufficient elevation is obtainable. From here the water will flow by gravitation and supply the following Parishes—Woodham Mortimer, Hazeleigh, Purleigh, Latchingdon, Althorne, Cold Norton, Stow Maries and Fambridge.

As the scheme was fully described in a Special report prepared by your Surveyor and myself, it is not necessary for me to repeat the details. There is a very strongly expressed desire on the part

of the inhabitants of these parishes that the work may be completed before the ensuing summer, and every effort should be made to accomplish this if possible. North Fambridge is one of the villages which will be supplied by the above scheme. Hitherto most of the water used has been derived from a deep well, but the floods which washed away the sea wall in November, 1897, and caused the River to submerge many acres of the parish, also submerged the road near surrounding the well, and the water since has become brackish and unusable. The attempts made to keep out the tidal water have not been successful. Meantime a temporary arrangement has been made with the G.E.R. Co., for the parishioners to obtain a limited supply from the station well. In another parish (Stow Maries) the great strain upon the public deep well, and the continuous fall in level of the water has so diminished the supply that it is now quite inadequate to meet the demands upon it. At Cold Norton a disused public well has again been requisitioned, but it only yields a very small quantity of water and this contains much Magnesium Sulphate. The want of water however was so great that your Council, at the request of the parishioners, fixed a windlass and bucket. The accumulated water was soon exhausted and the parish has no supply until the scheme above referred to is completed.

There is no public well in Latchingdon and the parishioners have hitherto been content to obtain water from two or three private wells. These however failed to meet the demand in the summer and much inconvenience was suffered. The parish therefore agreed to join in the public supply and this has enabled the Council to include Althorne also, as the mains must pass through Latchingdon to reach the latter parish.

Althorne has always suffered from a want of water, and at the request of the Parish Council, your Council attempted to obtain a supply from a localized patch of sand, east of the village.

Many parishioners expressed the opinion that water could be found in the village at a slight depth, and to test this a series of trial bores was made but no water was found. It was then decided to continue the boring experiments to the east of the village in the direction of a well which yielded an abundance of water for a small group of cottages. No water was found until we bored on the opposite side of the road to this well, and a tube well

was driven here. There appeared to be a fair amount of water when the well was driven, but from experiments made, the Surveyor and myself concluded that it was derived from a very small pocket of sand and would speedily be exhausted. This proved to be the case. However the small amount obtained was of great assistance for the time being.

Purleigh, the centre of the proposed new Water system, has suffered greatly during the summer. As usual, water has been carted from the public well, but this is not only expensive for the inhabitants who have to pay from  $\frac{1}{2}$ d. to 1d. for each bucket, but has been very inconvenient on account of the irregularity in carting. At the last meeting of the Rural District Council arrangements were made for having water carted twice a week to all parts of Purleigh and North Fambridge.

At Steeple the two public deep wells have yielded an abundant supply, both for the villagers and the farms. I have several times seen three large butts at one of the wells, Cardinal's. This is most used since being on lower ground than the old village well, the water is much more easily raised. The quality of water from the old well is not all I could desire and it has a tendency to become turbid after rain. It is not fully protected, but when your Council proposed to spend some money over it, to improve the surroundings, the parish objected and the work remains undone.

Some repairs have been done at the Goldhanger well. The water is somewhat brackish but apparently is the best obtainable.

At Tolleshunt D'Arcy the numerous private wells deriving water from the sand and gravel on which the parish stands, yield water which is in nearly *all cases impure*. Sanction was obtained from the Local Government Board a few years ago to provide a public supply, but the parishioners are so enamoured of their wells and uttered such strong protests that it has not been carried out. I have not pressed this matter very strongly since the time is rapidly approaching when this and the adjacent parish of Tollesbury (and possibly Goldhanger) will require a public supply, and I should prefer a larger scheme deriving water from a more abundant and better protected source than that originally intended.

Tollesbury is probably destined to increase, when a public water supply will be imperative. At present practically the whole parish is supplied from two public wells, one of which is in the

centre of the population and yields a water loaded with Nitrates, the products of the oxidation of sewage. There is a third well yielding a much better water but as it lies beyond the village it is little used.

Tolleshunt Knights and portion of Tiptree have suffered greatly during the past summer from scarcity of water, and various sources have been examined. A portion of this district lies very high and from whatever source the supply is obtained it will necessitate pumping. A feasible scheme, to pump water by a wind engine or an oil engine from a spring at Tiptree, is now under consideration and will probably be decided upon.

At Tillingham the supply from the various public wells was far too small for the requirements of the parish, and the principal well has been deepened, in part to increase the supply, but also to provide more storage. It is to be regretted that the parishioners objected to joining with Southminster when a public supply was provided for that parish as sooner or later such a supply will be required.

At Southminster the springs have remained apparently quite unaffected by the long drought and yield much more water than is at present been used. It is now admitted by all that the public supply has been of inestimable value and is helping greatly to develop the parish, large quantities of land having recently been sold for building purposes, and a number of houses have already been built. The demand for water is increasing and it is suggested that an additional collecting reservoir be made so that more of the spring water may be utilized.

At Mundon the chief well failed during the summer and practically the whole village has been dependent upon the well at the Hall. Mr. Solly generously allowed the District Council to take water from this well, and for many weeks during the summer a cart was employed taking the water round the district. Together with the Surveyor, I devised a scheme for supplying this parish from Mr. Solly's well, but the owners of the estate refused the necessary sanction. There is a disused bored well in the village. Report had it, that it yielded an excellent water and that the sunk portion only required deepening. The well was accordingly opened, and after a considerable amount of water had been taken from the bore-tube I examined a sample. I found it contained so

much Sulphate of Magnesia as to render it useless for drinking and domestic purposes, and I have no doubt this is why the well was abandoned. If the scheme above referred to cannot be carried out, I strongly urge that this parish should be included with the other parishes in the general supply now contemplated.

At Woodham Walter where there is a superabundance of water of the greatest excellence, the village is inadequately supplied, the springs being a little distance away. I have suggested piping one of these springs to the School and centre of the village.

Ulting village is also badly off, deriving its supply from a small land spring beyond the school. A scheme for protecting the spring, collecting the water and piping it down to the school, was practically decided upon, but has not yet been carried out.

It is not necessary to refer to the other parishes, as I have said enough to shew how great is the need of water in a large portion of the district, and to shew that the Council is now fully alive to its responsibilities, and is dealing with the subject in a comprehensive manner. There is no longer any serious opposition to a public supply for the parishes south of the Blackwater, in fact, the parishes which a few years ago most strongly objected to the proposal are now most anxious for the scheme to be carried out, and are blaming your Council for delays of which they themselves were the cause.

### Sewerage and Drainage.

Southminster.—Many years ago I reported upon the very unsatisfactory condition of this parish, and many improvements have since been effected; but at last the parish has come to the conclusion that attempts to repair the present system can only result in a temporary benefit, and have asked your surveyor to prepare plans for a complete system of sewerage. The success of the Water Supply has emboldened them, and I hope convinced them that money spent in real sanitary improvement is a profitable investment, and should a satisfactory scheme be decided upon and carried out, Southminster will become a very desirable place of residence, and has, I believe, a prosperous future to which to look forward.

Althorne and Steeple.—Improvements are urgently required in the drainage of both these parishes, but more especially the former. A scheme for Lower Althorne has been prepared, but as yet the difficulties connected therewith have prevented its being carried out.

Stow Maries.—The scheme for sewerage this scattered village has been abandoned as being far too expensive. The owners of the respective properties have been called upon to provide proper cesspools, &c., for each group of cottages, and when this is done, provided the cesspools are periodically emptied, all nuisances arising at present from the disposal of slops, &c., would be abated. Even now a marked improvement has been effected, the tenants taking greater care in the disposal of waste water.

At Tolleshunt D'Arcy, the small sewage farm has given rise to much trouble. More attention to the cultivation of the surface, and to the more equal disposal of the sewage thereon, will probably prevent a recurrence of any nuisance.

At Tollesbury, an extension of the existing sewers has been decided upon, and an application made to the Local Government Board for permission to borrow the money. The Board, however, desires the scheme to include such works at the outfall as will effectually prevent the fouling of the foreshore, since oysters are cultivated in the neighbourhood. Difficulties have arisen here as the existing outfall is near the terminus of the proposed light railway, but negotiations are proceeding for the purchase of a piece of land upon which to place the necessary tanks and filter beds.

### Public Scavenging.

Southminster and Tollesbury are the only parishes in which the house refuse is removed by the Authority. The Contractor at Southminster has, during the year, applied for and received an increased annual sum for the discharge of his duties. As no complaints have been made, and no serious nuisance observed arising from any accumulation of refuse, the duties appear to be satisfactorily carried out.

At Asheldham, there is a group of cottages about 200 yards north-west of the springs supplying Southminster with water. At

my recommendation, pail closets have been provided, and an arrangement made for having these attended to by a responsible person who disposes of the faecal matter in land below and off the gravel patch yielding the water.

### River Pollution.

Neither the Crouch nor the Blackwater receives sewage from any parish in the district, but a stream at Tiptree has been fouled by the sewage from the Jam Factory. Two small coke filter beds have been constructed, and a third will be added if necessary. The polluting matter was derived chiefly from the washing of fruit, and the apparatus used in preserving. A complaint was made in the autumn of the pollution of the River Blackwater by the sewage of Kelvedon, just over the border of your district. The complaint is being investigated by me, as County Medical Officer. The flow of the river here is much impeded by the growth of rushes.

### The Provision of Isolation Hospitals.

Many meetings have been held during the year to discuss this subject, and conferences were held with the Maldon Town Council with the object of forming a combination. The difficulties encountered, however, led your Council to decide to provide two small hospitals, one for the parishes to the north of the Blackwater, and the other for the parishes to the south of that river. A piece of land has been acquired at Heybridge for the former, and at Southminster for the latter. For the Southminster Hospital, plans have been prepared and approved by the Local Government Board. At the public enquiry held at Southminster on November 3rd, it was pointed out that a good deal of ground near the proposed site had been recently laid out for building purposes, and it was urged that an equally good or better site was possibly available at Asheldham, near the Southminster Water Works. A fair offer having been made for the proposed site, and the owner of the suggested site expressing his willingness to sell at a price to be fixed by arbitration, your Council decided to effect the change, provided the Local Government Board would give their sanction.

When this is received, the work will be proceeded with. There will be a small administrative block with apartments for the caretakers, and a ward block with two small wards and nurses' room, beside the necessary outbuildings.

A similar arrangement will probably be made for Heybridge.

### Nuisances arising from the Unloading and Carting of London Manure.

Several complaints have been received during the year. During the summer a conference was held with the Maldon Town Council, since it appeared desirable that bye-laws should be adopted in both the Urban and Rural Districts, and that they should be identical. A code was agreed upon, and having received the sanction of the Local Government Board, came in force on November 1st.

### Other Nuisances Reported.

Very few serious complaints were received, and in most instances the nuisances had previously been detected by your Inspectors, and steps were being taken to secure their removal. From Latchingdon I received information that two large families had taken possession of two old and dilapidated houses, which the heir to the late owner had refused to "take up" or enfranchise. They were copyhold, as is most of the wretched property in this district. I formally represented that the houses were unfit for habitation, and proceedings were taken to have them closed. When the case was called upon, the tenants were found to have executed many of the necessary repairs, and as both promised to complete what was necessary in a month, and also to abate the overcrowding, the hearing was adjourned. When next called upon, the houses had been so far renovated, and the overcrowding so far abated, that the summons was withdrawn. Other cases of overcrowding have been detected, and attempts made to secure their abatement, but labourers with large families cannot afford to pay the rent of a large cottage, even when such is obtainable, which unfortunately is too often not the case. A house at Tollesbury was also reported as being unfit for habitation, and upon visiting, I found it to be a ruinous old cottage far from any other habitation, and which I had

never suspected to be occupied. The owner was summoned, and a conviction obtained, but the tenant still remains, and some further action will have to be taken.

Another complaint was received of a family having erected a wooden shed at Little Totham and residing therein. I found that the family occupied two sheds, which they had erected in a field, with the permission of the owner. There was a closet attached. I reported it as being a new building and an infringement of the bye-laws, and that it had been inhabited without a 'Water' certificate having been obtained. The occupants contend that it is a temporary movable building, and have had affixed some small wheels to give colour to this assertion. Up to the present no decisive action has been taken, and the sheds remain occupied.

During the pea-picking season a complaint was laid against a farmer with reference to the character of the accommodation provided for the strangers who were employed by him in pea-picking. I visited this and other farms and made enquiries throughout the whole district, and found that the number of strangers so employed was very limited. In many parishes the wives and children of the resident labourers did all the picking, but in Purleigh, the locus of the complaint, the population is too thinly scattered to provide all the labour for such a large parish during the few weeks when the pea-picking is in full swing. In this particular instance there was no reasonable ground for the complaint, and I did not think it necessary to advise the Authority to make Bye-laws under the Fruit and Hop Pickers' Lodgings Act. The season however was nearly over when my investigation was made and it will be well to make an inspection earlier next season.

The carcase of a pig which had died in a local market was discovered by Inspector Warne in a slaughter-house. The butcher explained that it had been sent in by the owner and it was allowed to be removed for the purpose of 'boiling down,' a written guarantee being given that it would neither be used nor sold for human consumption. No prosecution followed.

### Results of Inspection.

Every parish in the district has been more or less thoroughly inspected. As mentioned in my last report this work is done

systematically, and the Inspectors report every month on the parishes examined. The results are duly recorded in books kept for the purpose, and these books are produced and examined at each meeting of the Council. The Inspectors first send 'informal' notices requiring the abatement of the nuisances detected, and if these are ignored the cases are brought before the Council and formal notices served. Further action has very rarely been required. There can be no doubt that a great improvement has already been effected for I now find much fewer defects, and when found, I almost invariably discover that they are already receiving the attention of the Inspectors. I consider this systematic inspection to be of the greatest importance. It has an educational effect upon the people and they are beginning to understand the necessity of cleanliness. I was much struck by the intelligent appreciation of our services by a conversation with an aged labourer in the Dengie District. I had a few days before given one of a series of Popular Lectures in Chelmsford, and I found that he was reading carefully the reports in the local paper. He expressed his determination to act upon my advice and be the sanitary inspector for his own premises, "but," he added in a regretful tone of voice, "if we all do that you will have nothing to do, Sir." I told him not to trouble on that score, as I should have no difficulty in finding another sphere of labour.

### Dairies and Cowsheds.

These are included in the systematic inspections as well as Slaughter Houses, Bake-houses and Workshops. The register of Dairies and Cowsheds is being completed. In nearly every parish it was found that one or more had escaped registration. The more recently erected Cowsheds are very satisfactory, the older ones, often leave much to be desired, but as, in practically all cases, the cows are turned out to pasture daily, the cows, on the whole, may be said to live under fairly healthy conditions. The water supply is rarely so abundant as is necessary to secure the desired degree of cleanliness, but in many parishes this will be remedied when a public water supply is provided.

## Water Analyses.

A considerable number of samples have been analysed, and the more important supplies such as the public supply at Southminster, the water from the chief public wells, (Steeple, Purleigh, Tollesbury, for example) have been submitted on several occasions to bacteriological as well as chemical examinations. The surroundings of the wells are always investigated, as I regard this as being as important if not more important, than the analyses. There are many unsatisfactory supplies and many localities in which the supply is deficient, but, I hope, the next few years will see a great improvement.

BURNHAM-ON-CROUCH. This, the most populous parish in the District, became in March last an Urban District and is therefore no longer under the control of your Council, and will not be again referred to in my reports, save when some matter of importance to both requires consideration. It is probable that when the Isolation Hospital is erected at Southminster some temporary arrangement will be made for the reception of patients from Burnham.

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I cannot conclude this portion of my report without a brief reference to the loss sustained by your Council in the death of Mr. Alfred C. Freeman, the late Clerk. The loss to me was that of a personal friend, whilst your Council lost a careful and conscientious adviser and an excellent officer. He had the esteem and confidence of all the members of the Council, and his kindness and courtesy gained him the affection of all his brother officials.

The resumè above given of the work done and the schemes which have been under consideration shew that your Council take a real interest in the improvement of the sanitary condition of the district, and whilst not wishing to force improvements upon parishes where the inhabitants strongly object, you use every endeavour to overcome such objections, and afford the Parish Councils or their representatives every opportunity of discussing any scheme which will affect them and for which they will have to pay. Your Chairman and Vice-Chairman have given a great amount of time to the discussion, with your officers, of many difficult points in connection with the sanitary administration, and in this way have saved much valuable time to your Council.

## Outbreaks of Infectious Disease.

During the year only 60 cases of Infectious Disease have been notified. This is 15 more than in 1897, but less than in any preceding year. More than half the cases occurred in the last quarter. The most marked decrease is in Diphtheria, since only 4 cases occurred during the whole year. The decline has been practically continuous since 1892, when no less than 128 cases were notified. This disease has only caused one death during the last two years, and this was a child who had recently come into the district. Typhoid Fever on the other hand shows a tendency to increase, more cases than usual having been recorded.

### Small Pox.

No cases recorded.

### Scarlet Fever.

This disease was introduced two or three times into the district, but only became epidemic in Woodham Mortimer. The disease was of so mild a type that it was impossible to trace its origin. There was no doubt that several children had suffered from slight attacks before the nature of the disease was recognized. Doubtless one of these upon returning to school had spread the infection and I was obliged to advise the closing of the school for a few weeks. Many more boys were attacked than girls.

Age and sex distribution:—

	0—1	1—5	5—10	10—15	15—25	25—	Totals.
Males	0	4	7	4	3	0	18
Females	0	0	2	4	2	0	8

### Diphtheria.

In none of the four cases could any connection be traced with a preceding case, neither were there any gross nuisances in or near the house infected. All occurred in different houses and in different parishes. In no case was a second inmate of the house attacked. In one instance it was found that several children around had had sore throats, but there was no reason to suspect that this was due to diphtheria. The fatal case was that of a child aged 4 years. This at first appeared to be a case of slight sore-throat, but after a

few days croupy symptoms supervened and a medical man was sent for. Tracheotomy was performed but without effect.

The patients were three females, aged 4, 5, and 6 years respectively, and a boy aged  $2\frac{1}{2}$  years.

### Typhoid Fever.

Four cases occurred in Steeple, 1 in Althorne, 3 in Tillingham, 1 in Asheldham, 4 in Tollesbury, 1 in D'Arcy, and 2 in Heybridge.

No. 1.—Tollesbury, June. Yachtsman. Taken ill whilst in Mediterranean.

No. 2, 3, & 4.—Tollesbury, July. Three young children in one family. Apparently in no way connected with No. 1.

No. 5.—Althorne, August. The patient was a market gardener employed at Great Wakering. Being taken ill there he came home to be nursed.

No. 6.—Tillingham, September. An elderly man. Water alleged to have been used from a well known to be polluted and which is allowed to remain open for slopping purposes. At this time there was a great scarcity of water in the village.

No. 7.—Steeple, September. This case occurred in a cottage, near which there was an offensive ditch. The well had given trouble during the summer, and for some time before the patients had been attacked water had been fetched from the village pump.

No. 8.—Steeple, September. This occurred at the opposite end of the village to No. 7. Origin could not be traced. Water from a private well appeared to be good. There was however an offensive ditch near the house.

No. 9.—Tillingham, October. A labourer working on one of the Marsh Farms. A fortnight prior to the commencement of the attack he was engaged in cleaning out a large pond which received all the drainage from the farm yard. Water from a bored well, good.

No. 10.—Steeple, October. Contracted from nursing No. 7.

No. 11.—Tolleshunt D'Arcy. The patient was a servant girl who contracted the disease at Southend and was for about 6 weeks in the Sanatorium there. After recovery came home and had a relapse.

No. 12.—Heybridge, October. Possible cause, spreading of London manure in front of house about 3 weeks before attack.

No. 13.—Asheldham, November. A bargeman who had been employed in carrying sewage sludge from London to Stanford-le-Hope. Came home ill to be nursed.

No. 14.—Steeple, November. Patient, wife of innkeeper. Origin could not be traced. Apparently not connected with any of the previous cases in the village.

No. 15.—Tillingham, November. Patient worked at a cement factory at Grays. Was taken ill there and came home to be nursed.

No. 16.—Heybridge, November. Most probable cause, the unloading of London manure on a wharf near the house.

Of these 16 cases, 5 were undoubtedly imported, and with reference to 3 there is some doubt as to the correctness of the diagnosis. One only was a secondary case. Of the remaining 7, two had been recently exposed to the effluvium from London manure, one had been working amongst manurial filth, two resided in cottages near which slops, etc., were thrown into an adjoining ditch, and one resided in a house probably deriving water from a polluted well, and one could not be accounted for.

#### Age and sex distribution ;

	Under 5	5—10	10—15	15—25	25—35	35—45	45—70	Total.
Males	0	1	0	3	3	1	0	8
Females	0	1	1	3	0	1	2	8

#### Infectious Diseases and the Peculiar People.

Much inconvenience is caused from time to time by the refusal of the members of this religious community to call in a medical man. Infectious sickness occasionally occurs amongst them, and being ignorant of its nature, there is considerable danger to the public, since such cases escape notification, and remain unknown until the infection has spread beyond their community. I acknowledge that, as a class, they are most attentive to their sick, and invariably receive me with courtesy, and give me all the information in their power. Notwithstanding this, I regret that the difficulty in proving that they are aware of the nature of the illness prevents the Council from taking any action to enforce the

provisions with reference to notification. Possibly the recent decision of the High Court, that the failure to call in medical aid constitutes "neglect," punishable by the law, may apply to cases in which the disease is infectious and if not resulting in death, yet tends to spread disease.

The subjoined Table shews the distribution of infectious diseases in the various parishes in the district:—

	Diphtheria & Croup.	Typhoid Fever.	Puerperal Fever.	Scarlet Fever.	Erysipelas.	Totals.
Southminster	0	0	0	0	1	1
Steeple	0	4	0	0	0	4
Althorne	0	1	0	0	0	1
Bradwell	1	0	0	0	2	3
Tillingham	0	3	1	0	0	4
Asheldham	0	1	0	0	0	1
Tollesbury	0	4	0	0	1	5
Tolleshunt D'Arcy	0	1	0	0	1	2
Tolleshunt Major and Minor	0	0	0	0	1	1
Wickham Bishops	1	0	0	4	0	5
Gt. and Lt. Totham	0	0	1	0	3	4
Heybridge	0	2	0	2	1	5
Woodham Walter	0	0	0	6	0	6
Woodham Mortimer	0	0	0	13	1	14
Mundon	1	0	0	0	0	1
Hazeleigh	0	0	0	1	0	1
Fambridge	0	0	0	0	1	1
Ulting	1	0	0	0	0	1

### Mortality Statistics.

The death rate for the year has been 16 per thousand. This is a little above the average.

The deaths from Zymotic Diseases include 1 from Diphtheria, 4 from Typhoid Fever, 3 from Whooping Cough, 2 from Measles, and 9 from Diarrhœa. Of the deaths from Diarrhœa, 7 were of children under 5 years of age, and occurred in the early autumn. Six of these were three years of age, and one was two years old. These, therefore, were not cases in which the disease could be attributed to the use of the feeding bottle. Fortunately, com-

paratively few children in the district are nourished during infancy in this artificial manner, hence our infantile mortality is very much lower than it is in Urban Districts.

### Infantile Mortality.

The rate of deaths amongst infants under one year of age, was 92 per 1000 births. This is a little below the average of previous years.

Table II gives the Mortality statistics for the various registration districts, and it is noteworthy that the sub-district, with the lowest average death-rate, has had a very high rate during the past year. Bradwell itself had the highest death rate, 32 per 1000 (*vide* Table VI). This is difficult to explain, but inasmuch as 5 deaths occurred in the Bradwell District from influenza and only 4 from this cause in all the other parishes in the Maldon District, it is probably due to the excessive prevalence of this disease. Moreover, the death rates vary considerably from year to year in all districts with a small population.

### Phthisis and Tubercular Diseases.

The recent conference held at Marlborough House, and at which the Prince of Wales presided, has done much to direct public attention to the preventable character of these diseases. During the year, there have been 17 deaths from Phthisis (consumption of the lungs), and 10 deaths from other forms of Tubercular Disease, a total of 27, or about one-ninth of the total deaths. These diseases are due to infection of the body by a microscopic organism called the Tubercl Bacillus. In adults, this chiefly attacks the lungs, causing consumption ; in children, it chiefly affects the intestines, causing consumption of the bowels. The microbe gets into the system in the following ways—(a) with food, and (b) with the air we breathe.

FOOD.—A considerable number of milch cows are tuberculous, and if the tubercular disease affects the udder of the cow, the milk will contain tubercle bacilli, and when consumed unboiled, it is capable of communicating the disease to human beings, especially to infants and young children.

The flesh of a tubercular animal may contain the bacilli, and if these are not killed by cooking, such meat may communicate tuberculous to the consumer.

Both these dangers may be guarded against by efficient cooking, since the infective organism is very quickly killed by a heat approaching that of boiling water.

The spread of tuberculous disease amongst cows is facilitated by overcrowding in badly ventilated cowsheds. Inspection to prevent such overcrowding and to ensure cleanliness is therefore essential. Unfortunately, efficient meat inspection is impossible in rural districts.

**AIR.**—Persons suffering from consumption expectorate a good deal, and the “phlegm” is usually loaded with bacilli. If the expectoration is allowed to dry on the floors or elsewhere, it ultimately becomes converted into dust, gets blown about, and so may be inhaled and infect others with the disease.

The filthy habit of expectorating should be abandoned, and persons suffering from consumption should either use a special spitting cup or soft rags. The former can be cleansed and disinfected with boiling water, and the latter can be burned. Houses or rooms which have been inhabited by persons in an advanced stage of the disease, should afterwards be thoroughly cleansed and disinfected.

It is now fully recognised that consumption in its early stages is curable. The bacteriological examination of the sputum affords the earliest information of the presence of the tubercle bacilli.

In order to afford medical men every facility for this early diagnosis, I (as County Medical Officer of Health) undertake the bacteriological examination of sputum at my laboratory. If the patient be poor no charge is made, otherwise a nominal fee of 2/6 is payable.

The establishment of Sanatoria for Consumptive patients for the open-air treatment with suitable dieting is greatly to be desired, and the National Association for the Prevention of Consumption is about to try the experiment of establishing such Sanatoria, on a self-supporting basis. I should like to see such an establishment on the elevated ground near Althorne overlooking the valleys of

the Blackwater and the Crouch, and another on or near the top of Danbury Hill.

The average number of deaths annually from Consumption of the Lungs in this district is 20, and 9 others die from Consumption of the Bowels and other organs. All these deaths may be said to be preventable, and with the Prince of Wales I ask—If preventable, why not prevented? Much can be done by the education of the public, and as Lord Salisbury thinks Medical men can do more to assist in such education than any other, and that it is to this education rather than to legislative measures that we must look for a diminution in the death-rate from Tubercular disease. As I agree with his Lordship on this point, I have ventured to refer briefly to the subject in this report.

I have the honour to be, Gentlemen,

Your obedient Servant,

JOHN C. THRESH.

## MALDON RURAL SANITARY DISTRICT.

## TABLE I.

Birth and Death-Rates and Infantile Mortality during 1898, compared with previous years.

PERIOD.	Per 1000 Population.			Infantile Mortality. Deaths of Infants under 1 year, per 1000 Births.
	Birth-rate.	Death-rate. All Causes.	Death-rate. Seven Zymotic Diseases	
1898	25.0	16.0	1.15	92
1897	23.8	13.5	.65	89
1896	27.5	14.3	1.1	110
1895	24.1	14.9	1.2	107
1894	28.9	16.1	.94	90
1893	27.7	14.75	1.7	90
1892	26.8	16.9	2.3	118
1891	29.7	16.3	.83	95
1890	29.8	16.9	1.99	111
1881-90	30.6	15.1	1.53	90

## TABLE II.

## SUB-REGISTRATION DISTRICTS.

DISTRICT.	1898.			1881-97.		
	Death Rate.	Zymotic Death Rate.	Infantile Mortality.	Death Rate.	Zymotic Death Rate.	Infantile Mortality.
Southminster	16.7	3.0	58	15.3	1.4	92
Bradwell	22.6	1.5	160	14.06	1.02	83
Maldon	14.9	.3	54	16.28	1.17	100
Tollesbury	14.2	.8	171	14.4	1.27	93

TABLE III.  
TABLE OF DEATHS during the year 1898, in the Rural Sanitary District of Maldon, classified according to Diseases, Ages, and Localities.

Sub-registration District	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES						MORTALITY FROM SUBJOINED CAUSES. DISTINGUISHING DEATHS OF CHILDREN UNDER 5 YEARS OF AGE																
	At all ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
SOUTHMINSTER...	36	9	1	3	1	9	13	Under 5	—	—	—	—	—	—	—	—	1	—	—	—	—	6	10
BRADWELL .....	52	9	4	1	0	14	24	5 upwards	—	—	3	—	—	—	—	—	3	1	3	1	—	14	26
TOLLESBURY .....	98	14	5	3	6	28	42	5 upwards	—	—	—	—	—	—	—	—	1	1	2	6	9	4	39
MALDON .....	45	9	4	0	1	10	21	5 upwards	—	—	1	—	—	—	—	—	1	—	—	6	20	2	79
TOTAL.....	231	41	14	7	8	61	100	5 upwards	—	—	—	—	—	—	—	—	3	7	5	7	1	2	32

The subjoined numbers have to be taken into account in the above records of mortality.

Deaths occurring in the Workhouse outside the district among persons belonging thereto.	Under 5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Deaths occurring within the district among persons not belonging thereto.	Under 5	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1	1	16	22

\* 3 belong to Southminster, 6 to Bradwell, 9 to Tollesbury, and 5 to Maldon Districts.

TABLE IV.  
TABLE of POPULATION, BIRTHS, and of NEW CASES of INFECTIOUS SICKNESS coming to the knowledge of the Medical Officer of Health, during the year 1898, in the Rural Sanitary District of Maldon.

SUB-REGISTRATION DISTRICT.	Population at all Ages.	AGE.	New Cases of Sickness in each Locality coming to the knowledge of the Medical Officer of Health.									
			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued Relapsing.	Puerperal.	Cholera.	Erysipelas.
SOUTHMINSTER	2290	155	Under 5	—	—	—	—	5	—	—	—	1
BRADWELL ...	2516	56	5 upwards	—	—	—	—	—	—	—	—	6
TOLLESBURY ...	7464	7500	82	Under 5	—	—	—	—	—	—	—	—
MALDON ...	3353	3354	164	5 upwards	—	6	1	—	—	—	—	7
TOTALS ...	15623	15710	457	Under 5	—	4	1	—	—	—	—	22
			5 upwards	—	16	1	—	—	—	—	—	5
				—	4	2	—	—	—	—	—	19
				—	22	2	—	—	—	—	—	6
				—	—	—	—	—	—	—	—	12
				—	—	—	—	—	—	—	—	54

The "Notification of Infectious Disease" has been compulsory since 1890. There is no Isolation Hospital in the District.

TABLE V.  
Maldon Rural Sanitary District.  
Table of Meteorological Data, Deaths, Infectious Diseases, &c., for Y

TABLE VI.

## DEATH-RATES IN THE PARISHES, 1898.

	PARISHES.	1898		DEATH RATE.—Mean for 16 years, 1881—97.	Population '98.
		All causes.	All Causes.		
1	Asheldham, Dengie, and St. Lawrence	...	...	9.8	648
2	Tollesbury	...	...	10.7	1690
3	Langford and the Tothams	...	...	9.6	1238
4	Heybridge	...	...	20.35	1621
5	Tillingham	...	...	23.1	951
6	Woodham Walter and Mortimer	...	...	12.6	789
7	Cold Norton, Stow, Purleigh, and Hazeleigh	...	...	12.2	1309
8	Bradwell-on-Sea	...	...	32.0	905
9	Cricksea, Althorne, and Mayland	...	...	14.0	643
10	Goldhanger and Tolleshunt D'Arcy	...	...	11.2	1336
11	Southminster	...	...	17.7	1253
12	Ulting, Wickham Bishops, Great and Little Braxted	...	...	14.2	1124
13	Tolleshunt Major and Knights	...	...	18.07	885
14	Steeple, Latchingdon, Mundon, and North Fambridge	...	...	26.0	1038

These death rates are calculated from the number of deaths which have actually occurred in the parishes, to which have been added the deaths occurring in the Union Workhouse of paupers belonging to the parishes.

TABLE VII.  
MALDON RURAL SANITARY DISTRICT.

TABLE shewing the Total Number of BIRTHS and DEATHS, also the Number of Deaths at various ages and from various diseases, each year, from 1890 to 1898.

YEAR.	BIRTHS	Total Deaths.	Under 1 yr.	1	5 to 15	15 to 25	25 to 65	Over 65	Phthisis.												
									Smallpox.	Scarlet Fever.	M. Croup.	Typhoid Fever.	Continued Fever.	Puerperal Fever.	Fryspeleas.	Measles.	Whooping Cough	Diarhoea.	Total Zymotic Diseases.	Phthisis.	
1890	540	307	60	29	19	12	68	119	—	—	3	7	—	—	19	—	—	36	30	23	
1891	536	294	51	19	10	17	65	132	—	—	4	1	1	1	3	3	1	15	15	23	
1892	463	307	56	38	14	12	69	118	—	—	6	1	—	—	12	19	6	46	31	18	
1893	500	266	45	23	15	14	60	109	—	—	5	2	3	2	8	1	9	32	18	18	
1894	522	292	46	19	12	13	79	123	3	4	2	4	3	0	—	—	—	4	—	21	
1895	438	270	47	18	14	10	65	116	1	7	—	—	—	1	—	—	—	7	22	18	
1896	498	261	55	18	10	14	57	107	—	2	—	—	3	1	—	—	—	—	20	10	
1897	435	247	41	16	45	15	41	129	—	1	8	—	—	—	—	—	—	3	8	12	
1898	457	253	42	13	7	8	65	118	—	—	—	—	4	—	—	—	3	9	18	17	
Mean for 9 years.	487	277	49	21	16	13	63	119	—	—	4 to 5	1	3	—	—	—	—	7	4 to 5	24	20

Summary of Work done through the Sanitary Inspectors in the Rural Sanitary District of Maldon during the year ending 31st December, 1898, for the Thurstable and Dengie Districts of the Union.

**THURSTABLE DISTRICT.**

**DENGIE DISTRICT.**

	Total No. for year.		Total No. for year.
1 Complaints received .. ..	20	1 Complaints received	13
2 Nuisances detected ... ..	115	2 Nuisances detected	110
3 Nuisances abated .. ..	83	3 Nuisances abated	123
4 Notices served .. ..	29	4 Notices served	121
5 Summonses taken out .. ..	1	5 Summonses taken out	3
6 Convictions .. ..	1	6 Convictions	0
7 Cottages inspected .. ..	476	7 Cottages inspected	all
8 Lodging-houses inspected .. ..	0	8 Lodging-houses inspected	0
9 Slaughter-houses inspected .. ..	all	9 Slaughter-houses inspected	7
10 Bake-houses inspected .. ..	1,	10 Bakehouses inspected	12
11 Dairies & milk shops inspected .. ..	1,	11 Dairies and Milk Shops inspected	0
12 Cowsheds inspected .. ..	1,	12 Cowsheds inspected	28
13 Workshops inspected .. ..	0	13 Workshops inspected	0
Filthy houses cleansed, sec. 46 Public Health Act, 1875 .. ..	0	14 Filthy houses cleansed, sec. 46 Public Health Act, 1875 .. ..	1
15 Houses disinfected .. ..	15	15 Houses disinfected .. ..	17
16 Overcrowding abated .. ..	2	16 Overcrowding abated .. ..	5
17 Houses placed in habitable repair .. ..	0	17 Houses placed in habitable repair	2
18 Houses closed .. ..	0	18 Houses closed	0
19 Houses erected or re-built .. ..	31	19 Houses erected or re-built	0
20 "Certificates" granted .. ..	8	20 "Certificates" granted	0
21 "Certificates" deferred .. ..	0	21 "Certificates" deferred	0
22 Wells sunk or improved supplies of water afforded .. ..	2	22 Wells sunk or improved supplies of water afforded	1
23 Wells cleansed or repaired .. ..	9	23 Wells cleansed or repaired	4
24 Wells closed .. ..	0	24 Wells closed	1
25 Houses connected with sewers .. ..	8	25 Houses connected with sewers	0
26 " " with water mains .. ..	6	26 " " water mains .. ..	0
27 Earth, pail, or improved privies constructed or existing privies altered .. ..	73	27 Earth, pail, or improved Privies constructed, or existing Privies altered .. ..	25
28 Privies & W.C.'s repaired; W.C. supplied with water .. ..	0	28 Privies and W.C.'s repaired; W.C.'s supplied with water	22
29 Cisterns cleansed, repaired, or covered .. ..	0	29 Cisterns cleansed, repaired, or covered .. ..	0
30 Animals improperly kept removed .. ..	0	30 Animals improperly kept re- moved .. ..	5
31 Samples of water taken for analysis .. ..	22	31 Samples of water taken for Analysis .. ..	19
32 Compensation paid for destruc- tion of infected bedding .. ..	0	32 Compensation paid for destruc- tion of infected bedding .. ..	£1 5 6
33 Seizures of unsound meat, &c. .. ..	0	33 Seizures of unsound Meat, &c. .. ..	—

(Signed) HORACE G. KEYWOOD,  
Mem. San. Inst.,  
Inspector of Nuisances.

(Signed) MAURICE C. WARNE.  
Assoc. San. Inst.,  
Inspector of Nuisances.